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(54) Title: METHOD OF MANAGING ACCESS TO A RANDOM-ACCESS COMMUNICATION NETWORK

(54) Titre : GESTION DE L'ACCES A UN RESEAU DE COMMUNICATIONS A ACCES ALÉATOIRE

The diagram illustrates a satellite-based mobile communication system. A satellite (SAT) at the top has two ground-to-space links. The left link connects to a User Equipment (UE) inside a circular coverage area labeled ZC. The right link connects to a Node B. Node B is part of a cell structure with a Mobile Terminal (MT) and a Sector Gateway (SG). Node B is also connected to an RNC, which is connected to a Core Network (CN).

(57) Abstract: The invention relates to a device (D) which is dedicated to the management of communications in a base station (SB) of a random-access communication network. The inventive device comprises processing means (MT) which are responsible for: (i) dividing the time intervals into slots, whereby each slot is associated with an access slot during which a terminal (UE) can transmit a network access request and whereby the width of each slot is equal to the duration of an access request; (ii) sub-dividing the time intervals into sub-intervals (SI) comprising a number of consecutive slots which is at least equal to two; (iii) in each sub-interval (SI), designating at least one invalid slot which is associated with an invalid access slot; (iv) in each sub-interval (SI), defining a number of temporally-offset windows (F) having a width equal to that of a slot, said number being at least equal to the number of slots in the sub-interval; (v) upon receipt of an access request transmitted by a calling terminal (UE), using the window (F) belonging to the access request to deduce at least one access time of the calling terminal in relation to a reference, and, subsequently, using said access time to determine the instant of transmission of an acknowledgement message to the calling terminal (UE), such that the terminal can receive the message in a pre-defined acknowledgement time interval.

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